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STEAM GENERATION APPARATUS AND METHOD

Abstract

In one aspect, the invention provides a steam generation apparatus that is liquid fuel fired and addresses conversion of gaseous fuel SIB units to operate with liquid fuel. The invention also relates to a conversion unit for a steam injection boiler, a method for converting a steam injection boiler from gas firing to possible liquid fuel firing and a method for generating steam from a liquid fuel source. The invention employs a fired heater for heating the liquid fuel to a temperature suitable for firing and preheats the water to compensate for the shortfall in heat liberation when a gas boiler is converted to use liquid fuel. In another aspect of the invention, production of steam is achievable consistently by employing step-up heaters with a steam injection boiler. The heaters being connected in parallel to continue heating the water/steam to achieve a higher quality steam over that produced in the boiler while minimizing consideration as to the adverse effects of coil fouling in the boiler.